

Docket No.: SANZ-254

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 11-20 were rejected under 35 U.S.C. §103(a) for allegedly being unpatentable over the combination of Love and Shinohara. Applicants respectfully transverse.

As set forth in Applicants prior amendment, the presently claimed invention recites the following features (item numbers included for reference):

- a) method for the operation of an in-line coating installation
- b) with an inward transfer chamber (2)
- c) with an adjoining buffer chamber (21)
- d) with a process chamber (3) adjoining thereon
- e) with a further buffer chamber (22) adjoining it and
- f) an outward transfer chamber (4) adjoining it
- g) with gates (61, 64, 65, 62) provided between the chambers, which can be opened and closed
- h) where the inward transfer chamber (2), the buffer chamber (21, 22) and the outward transfer chamber (4) are developed as identical modules and for receiving substrates up to a specified maximum size
- i) for the coating of substrates (55), which are greater than the modules
- j) the gate (61) between the inward transfer chamber (2) and the buffer chamber (21)
- k) as well as the gate (62) between the buffer chamber (22) and the outward transfer chamber (4)

Docket No.: SANZ-254

l) are opened and the pressure conditions of the buffer chambers (21,22) and of the inward transfer (2) or outward transfer chamber (4) are adapted to one another.

Referring first to element c), according to the Examiner, the adjoining buffer chamber of the present invention corresponds to the isolation chamber in column 5, lines 25-43 of Love, and its function as a buffer chamber is described in column 10, line 41 to column 12, line 24, namely buffering pressure changes between the entrance or exit chamber and the coating chamber in column 11, lines 15-20.

According to the present invention the pressure in buffer chamber 21 is brought close to the pressure of the process chamber 3 (page 4, last paragraph), i.e. the pressure of chamber 21 is higher than the pressure of chamber 3. The isolation chamber of Love is operated below the coating chamber pressure (col. 5, line 40). The isolation chamber of Love has extremely low pressures, i.e. absolute pressures of between 0.01 and 0.001 microns (col. 11, lines 24/25), wherein 1 micron is 1/1000 mm pressure of mercury and where 1 mm Hg = 1.00000014 Torr = 1.33222 mbar = 133.322 Pa.

Thus, the pressure of the isolation chamber is about $10^{-5} \dots 10^{-6}$ mm Hg or $133.322 \cdot 10^{-5} \dots 10^{-6}$ Pa = $1.3 \times 10^{-3} \dots 10^{-4}$ Pa with Love.

The process chamber of the present invention has a pressure of 3×10^{-3} mbar (page 11, middle), whereas the buffer chamber has a pressure of 0.05 mbar = 5×10^{-2} bar (page 12, second paragraph) = $0.05 \times 10^{-3} \times 10^{-5}$ Pa = 0.05×10^{-2} Pa = 5 Pa. Thus, the pressures of the isolation chamber and of the buffer chamber are different.

The same differences pointed out above are true with respect to the feature e) "with a further buffer chamber adjoining it."

Claim 11 also sets forth the feature g) "with gates (61, 64, 65, 62) provided between the chambers which can be opened and closed". Those gates are described, according to the Examiner in col. 4, lines 3-24 and col. lines 3-20 of Love. However, col. 4, lines 3-24 does not disclose "gates which can be opened or closed". The terms "sealed off" and "the chambers are again isolated from each other" (col. 4, line 18) do not disclose gates.

Docket No.: SANZ-254

As to item h), Love also fails to disclose chambers developed as identical modules. Instead, the isolation chamber volume is large compared with the access chamber volume (col. 13, lines 8-9). Also, the substrate of Love is not of a specified maximum size with respect to different chambers. Accordingly, feature h) "where the inward transfer chamber (2), the buffer chamber (21, 22) and the outward transfer chamber (4) are developed as identical modules and for receiving substrates up to a specified maximum size" is not disclosed by Love.

Also, the Examiner admits that feature i) "for coating of substrates (55) which are greater than the modules" is not disclosed by Love.

Shinohara discloses a couple of buffer chambers, however, these buffer chambers do not adjoin an inward transfer chamber. Features c) and e) relate to a special buffer chamber, not to a buffer chamber as such, and are not disclosed by Shinohara.

Shinohara also does not disclose substrates up to a maximum size. The "size" of a tape (length) is not a limiting criterion of Shinohara.

Still, nothing is disclosed about the size of the buffer chamber and the outward transfer chamber. Fig. 4 is merely a schematic drawing. The buffer chambers, for instance, could be greater in depth than the transfer chambers.

Thus, feature h) is not disclosed by Shinohara either.

The Examiner has also not shown where Shinohara discloses substrates which are greater than the modules as set forth in i). The Examiner has admitted that this Feature is not disclosed by Love, and has not asserted that this feature is disclosed by Shinohara.

Thus the combination of Love and Shinohara cannot lead one to the embodiment of claim 11 if none of the cited references discloses this feature. Clearly, the Examiner has failed to establish a prima facie case of obviousness because not all features of the claims are taught or suggested by the cited references.

The Examiner's conclusion that one of ordinary skill in the art would combine Love and Shinohara because though they might be classified as inline and batch apparatuses,

Docket No.: SANZ-254

the two both use similar procedures and apparatuses and one of ordinary skill in the art could easily conceive of the two inventions being combined to continuously coat a larger substrate, is merely an assertion unsupported by an objective evidence.

One ordinary skilled in the art would never try to find a solution in Shinohara for the problem of coating normal substrates as well as also oversized with only one installation, since oversized substrates have no connection with the subject matter of Shinohara.

Furthermore, the Examiner has only cited the word "buffer" of Shinohara without taking into account that the "buffers" of the present invention and of Shinohara have different meanings.

The substrates to be coated by the present invention are "flat architectural glass, metal plates, Si wafers, synthetic material plates and the like" (page 3, second paragraph) and not "endless" tapes.

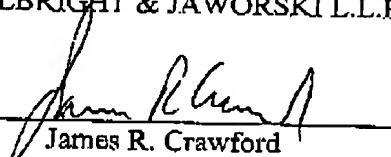
In view of the foregoing, allowance is respectfully requested.

The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-0624, under Order No. NY-SANZ-254-US. A duplicate copy of this paper is enclosed.

Respectfully submitted,

FULBRIGHT & JAWORSKI L.L.P.

By


James R. Crawford
Reg. No. 39,155

666 Fifth Avenue
New York, NY 10103
(212) 318-3148